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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,697	08/18/2003	Mark E. Thompson	10020/25702	5095

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EXAMINER

COVINGTON, RAYMOND K

ART UNIT	PAPER NUMBER
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1625

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/643,697	<b>Applicant(s)</b> THOMPSON ET AL.	
	<b>Examiner</b> Raymond Covington	<b>Art Unit</b> 1625	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11/3/05, 3/31/04.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 9-12, 14 and 16-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/31/04</u> . | 6) <input type="checkbox"/> Other: _____  |

Applicant's election of Group I with traverse is acknowledged. Applicants' comments have been noted and considered however the restriction requirement is deemed sound for reasons of record and hereby maintained.

It is noted with regard to Groups I and II that they are each drawn to structurally different compounds and a reference anticipating one group would not render the other group unpatentable. Further, the searches are different and diverse. The fact that Z may contain a pyrazole would not affect the large burden of search required as X or Y can be for example morpholine with various searches in class 544.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, because the specification, does not reasonably provide enablement for a -X-Z-Y- substituent with X and Y being heteroatom, heteroatom-containing group or heterocycle, Z being a divalent. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

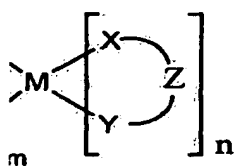
There are many factors to be considered when determining whether there is sufficient

evidence to support a determination that a disclosure does not satisfy the enablement requirement

and whether any necessary experimentation is undue". These factors include

- 1) the breadth of the claims,
- 2) the nature of the invention,
- 3) the state of the prior art,
- 4) the level of one of ordinary skill,
- 5) the level of predictability in the art,
- 6) the amount of direction provided by the inventor,
- 7) the existence of working examples, and
- 8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The breadth of the claims with respect to the X-Z-Y- substituent alone



Includes all known heteroatom, heteroatom-containing group or heterocycle substituents.

The specification only has support for, e.g., pyrazoles, triazoles, tetrazoles, thiazoles, furans and pyridines.

The nature of the invention is a cyclometalated complex compound wherein the X-Z-Y- substituent, according to the specification page 18 paragraph 00053, can only be are heterocycles selected to have functionality appropriate for coordinating to M.

The level of skill and predictability in the art would require, for example, that every known heterocycle be tested in order to determine which heterocycles would have functionality appropriate for coordinating to M.

The direction provided by applicants only support pyrazoles, triazoles, tetrazoles, thiazoles, furans and pyridines heterocycle substituents.

There are no working examples for any others.

The unclear definition of the X-Z-Y- substituent, requires an undue amount of experimentation to practice the invention. The general terms of having a heteroatom, heteroatom-containing group or heterocycle, divalent linker gives rise to numerous permutations and combinations of hetero groups.

There is insufficient disclosure of starting materials that would place such a diverse genus of compounds in possession of the public in the event of a patent grant. In addition, there is no reasonable assurance that such an alleged genus of compounds would possess all of the alleged properties for use. See *In re Fouche* 169 USPQ 429 ((CCPA 1971)). Quite clearly, more than routine experimentation would be required to place the claimed compounds, compositions and methods of use in possession of the public in the event of a patent grant. See *In re Armbruster*, 185 USPQ 152 (CCPA 1975).

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors), at the time the application was filed, had possession of the claimed invention.

The claims recite a -X-Z-Y- substituent with X and Y being heteroatom, heteroatom-containing group or heterocycle, Z being a divalent linker. There are no examples nor is there any description or definition of what these groups are.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

In the claims the Z substituent is defined as a divalent linker, and a group of the formula  $JR'_pR''_q$ . These dual definitions render the claims indefinite as it is not clear what applicants' regard a the invention.

#### Claim Rejections - 35 USC, 103

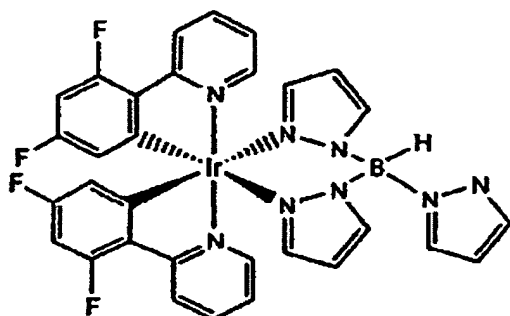
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to

which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamansky et al PG PUB US 2002/0182441 in view of Fernandez et al, Polyhedron, v.10 no. 14 pp 1595-8 (1991).

Lamansky et al teach a pyridinephenyl poly(pyrazolyl)boratoiridium complexes. See, for example, figure 8d and figure figure 6a.



Fernandez et al teach poly(pyrazolyl)boratoiridium complexes. See, for example, page 1595 left column first paragraph.  $\text{Ir}(\text{H}_n\text{BPz}_{4-n})(\text{cod})$ ,  $n = 0, 2$ . Note in particular that the pyrazolyl borato ligands can be tri or tetra pyrazolyl, e.g. where  $n=0$ .

Lamansky et al differs in that a tetrapyrazolyl-borato ligand is not taught, i.e. where the H hydrogen on the B boron is also a pyrazolyl. However, Fernandez et

al teach that the pyrazolyl borato ligands can be tri or tetra pyrazolyl, e.g. where  $n=0$  in an analogous compound.

To modify Lamansky et al to include the tetra ligand would have been obvious to one of ordinary skill in the art as the results would not have been unexpected in light of the close structure relationship.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Covington whose telephone number is (571) 272-0681. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, C. Tsang can be reached on (571) 272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair->



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contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Raymond Covington  
Examiner  
Art Unit 1625

*Re*  
RKC

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